July 2004

New Debris Disk Candidates at 100 Myr

Nadya Gorlova¹, Deborah L. Padgett², George H. Rieke¹, James Muzerolle¹, Jane E. Morrison¹, Chad W. Engelbracht¹, Dean C. Hines^{1,3}, Joannah C. Hinz¹. Alberto Noriega-Crespo², Luisa Rebull¹, John A. Stansberry¹, Karl Stapelfeldt², Kate Y.C. Su¹, and Erick T. Young¹

(Email: ngorlova@as.arizona.edu)

¹Steward observatory, University of Arizona, Tucson, Arizona ²Spitzer Science Center, California Institute of Technology, Pasadena, California ³Space Science Institute, Boulder, Colorado

We have carried out a 24 μ m survey of the 100 Myr old open cluster M47 (NGC 2422) with the MIPS instrument on Spitzer. Twenty-four percent of A-B stars show excesses K-[24] > 0.5 mag. Among late-type stars, only two show significant excesses: a K1V star with K-[24] = 1.1 and an F9V star with K-[24] = 3.7. The F9V star is the first known post-TTau dwarf showing excess comparable to β Pic. Either this star possesses an exceptionally massive disk created in a recent planetesimal collision, or this disk is hotter than usual debris disks.

